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Remarks

This application has been reviewed in light of the Final Office Action of February 28, 2007. Claims 1, 3-25, and 27-29 are pending, and all claims are rejected. In this paper, claims 3 and 6 are cancelled, without prejudice; and the following remarks are submitted. Reconsideration of this application is respectfully requested.

The Final Office Action indicated that all claims were rejected in the Office Action Summary, although the Detailed Action failed to address both of dependent claims 20 and 21. The Examiner indicated in a phone call with Applicant's representative on May 23, 2007 that claims 20 and 21 were meant to have been included in the Ground 3 and Ground 4 rejections, and are treated and grouped as such herein.

Ground 1. Claims 3 and 6 are objected to as being of improper dependent form.

Applicant has cancelled claims 3 and 6 responsively.

Ground 2. Claim 13 is rejected under 35 USC 112, second paragraph. Applicant traverses this ground of rejection.

Claim 13 recites in part:

the step of melting and solidifying includes the step of
melting and solidifying the initial metallic particle to produce the metallic
article, without any addition of a metallic alloying element to the initial metallic
particle."

Claim 13 recites that no metallic alloying element is added in the step of melting and solidifying. Claim 13 does not relate to the earlier steps of furnishing and chemically reducing. Claim 13 may be compared with claim 14, where there is a further addition of a metallic alloying element in the step of melting and solidifying.

Applicant submits that claim 13 is fully consistent with claim 1, in that claim 1 does not specify that there should or should not be an addition of an alloying element in the step of melting and solidifying.

Ground 3. Claims 1, 3, 5-7, 11, 13, 14, 15, 17-19, 20, 21, 24, and 27-29 are rejected under 35 USC 103 over Grant U.S. Patent 3,000,734 in view of "applicant's admitted prior art (paragraphs 0002-0004 of the instant specification)." Applicant traverses this ground of rejection.

Grant teaches processing where most of the constituents of a metallic alloy are supplied as metals. One constituent is supplied as a nonmetal. In the particular circumstances of Grant, there is a chemical exchange reaction, with the result of the reaction being that one of the supplied metals is converted into a nonmetal, and the cation of the nonmetal is converted to its metallic form.

"Admitted prior art"

The "applicant's admitted prior art (paragraphs 0002-0004 of the instant specification)" does not qualify as prior art under §103, and may not be used to form the present rejection.

MPEP 2129 II provides what may be used as prior art from the Specification:

"Where the specification identifies work done by another as 'prior art,' the subject matter so identified is treated as admitted prior art."

This position is supported in the MPEP by a reference to In re Nomiva, "holding applicant's labeling of two figures in the application drawings as 'prior art' to be an admission that what was pictured was prior art relative to applicant's improvement."

The present Specification does not label or otherwise identify anything as "prior art," and specifically does not identify the material at para. [0002]-[0004] as "prior art" "applicant's admitted prior art (paragraphs 0002-0004 of the instant specification)" must be withdrawn to conform to MPEP practice.

Merits of the rejection

In the following discussion and for the sake of argument, Applicant will address the “admitted prior art” as though it is properly applied. As demonstrated above, it is not properly applied.

MPEP 2142, under ESTABLISHING A PRIMA FACIE CASE OF OBVIOUSNESS, provides: “To establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine the reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant’s disclosure. [citations omitted]. See MPEP para. 2143-2143.03 for decisions pertinent to each of these criteria.”

First requirement--there must be an objective basis for combining the teachings of the references

The first of the requirements of MPEP 2142 is that “there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine the reference teachings.” The present rejection is a §103 combination rejection. To reach a proper teaching of an article or process through a combination of references, there must be stated an objective motivation to combine the teachings of the references, not a hindsight rationalization in light of the disclosure of the specification being examined. MPEP 2142, 2143 and 2143.01. See also, for example, In re Fine, 5 USPQ2d 1596, 1598 (at headnote 1) (Fed.Cir. 1988), In re Laskowski, 10 USPQ2d 1397, 1398 (Fed.Cir. 1989), W.L. Gore & Associates v. Garlock, Inc., 220 USPQ 303, 311-313 (Fed. Cir., 1983), and Ex parte Levengood, 28 USPQ2d 1300 (Board of Appeals and Interferences, 1993); Ex parte Chicago Rawhide Manufacturing Co., 223 USPQ 351 (Board of Appeals 1984). As stated in In re Fine at 5 USPQ2d 1598:

"The PTO has the burden under §103 to establish a prima facie case of obviousness. [citation omitted] It can satisfy this burden only by showing some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references."

And, at 5 USPQ2d 1600:

"One cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention."

Following this authority, the MPEP states that the examiner must provide such an objective basis for combining the teachings of the applied prior art. In constructing such rejections, MPEP 2143.01 provides specific instructions as to what must be shown in order to extract specific teachings from the individual references:

"Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention when there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); In re Jones, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992)."

* * * * *

"The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination." In re Mills, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990)."

* * * * *

"A statement that modifications of the prior art to meet the claimed invention would have been 'well within the ordinary skill of the art at the time the claimed invention was made' because the references relied upon teach that all aspects of the claimed invention were individually known in the art is not sufficient to establish a prima facie case of obviousness without some objective reason to combine the

teachings of the references. Ex parte Levengood, 28 USPQ2d 1300 (Bd. Pat. App. & Inter. 1993)."

Here, there is set forth no objective basis for combining the teachings of the references in the manner used by this rejection, and selecting the helpful portions from each reference while ignoring the unhelpful portions. An objective basis is one set forth in the art or which can be established by a declaration, not one that can be developed in light of the present disclosure.

In this case, Grant is applied for a teaching that the material is to be produced without melting the constituents. The "admitted prior art" is applied for an express teaching to the contrary (para. [0004]): "These components and other articles are typically manufactured by furnishing the metallic constituents of the selected alloy, melting the constituents, and casting the molten mixture into a crucible to form a cast ingot." There is no basis stated for attempting to combine two references that teach directly against each other.

If the rejection is maintained, Applicant asks that the Examiner set forth the objective basis found in the references themselves for combining the teachings of the references, and for adopting only the helpful teachings of each reference and disregarding the unhelpful teachings of the reference. Thus, as it stands now, the invention as a whole is not prima facie obvious over the combined teachings of the prior art.

Second requirement--there must be
an expectation of success

The second of the requirements of MPEP 2142 is an expectation of success. There is no expectation of success...This requirement has not been addressed in the explanation of the rejection, and in any event more than Examiner's argument is required here.

As stated in MPEP 2142, "The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. {citations omitted}."

Third requirement--the prior art
must teach the claim limitations

The third of the requirements of MPEP 2142 is that "the prior art reference (or references when combined) must teach or suggest all the claim limitations." In this regard, the following principle of law applies to all §103 rejections. MPEP 2143.03 provides "To establish prima facie obviousness of a claimed invention, all claim limitations must be taught or suggested by the prior art. In re Royka, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). All words in a claim must be considered in judging the patentability of that claim against the prior art. In re Wilson, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCFA 1970)." [emphasis added] That is, to have any expectation of rejecting the claims over a single reference or a combination of references each limitation must be taught somewhere in the applied prior art. If limitations are not found in any of the applied prior art, the rejection cannot stand. In this case, the applied prior art references clearly do not arguably teach some limitations of the claims.

Claim 1 recites in part:

"furnishing a mixture of at least two nonmetallic precursor compounds
together comprising the constituents of the metallic article..."

Neither reference has such a teaching. Grant teaches that metallic powders (not nonmetallic precursor compounds) are mixed together for all but one constituent of the metallic article (Final Office Action, page 4, lines 17-19). At no point does Grant suggest that there is furnished "a mixture of at least two nonmetallic precursor compounds," those nonmetallic precursor compounds "together comprising the constituents of the metallic article..." In Grant, nearly all of the constituents of the metallic article are furnished as metals, not nonmetallic precursor compounds.

"Admitted prior art" teaches away from this limitation, by teaching that the constituents are furnished as metals: "These components and other articles are typically manufactured by furnishing the metallic constituents of the selected alloy..." (para. [0004]). It is a well-established principle of law that a prima facie case of obviousness may not

properly be based on a reference which teaches away from the present invention as recited in the claims.

"A reference may be said to teach away when a person of ordinary skill, upon reading the reference, would be discouraged from following the path set out in the reference, or would be led in a direction divergent from the path that was taken by the applicant. In re Sponnoble, 160 USPQ 237, 244 (CCPA 1969)...As "a useful general rule,"..."a reference that 'teaches away' can not create a prima facie case of obviousness." In re Gurley, 31 USPQ2d 1130, 1132 (Fed. Cir. 1994)."

In the case of the "admitted prior art," a person of ordinary skill is taught to make the metallic article by melting the metallic constituents together.

Claim 1 also recites in part:

"chemically reducing the mixture of nonmetallic precursor compounds to produce an initial metallic particle"

Neither reference teaches this limitation, because neither reference teaches a "mixture of nonmetallic precursor compounds."

Claim 1 further recites in part:

"melting and solidifying the initial metallic particle to produce a cast ingot of the metallic alloy, wherein the step of melting and solidifying produces an alloy that is a nickel-base superalloy, a cobalt-base superalloy, an iron-base superalloy, an iron-nickel-base superalloy, an iron-nickel-cobalt-base superalloy, or a martensitic steel;"

Neither reference teaches producing "an alloy that is a nickel-base superalloy, a cobalt-base superalloy, an iron-base superalloy, an iron-nickel-base superalloy, an iron-nickel-cobalt-base superalloy, or a martensitic steel." The explanation of the rejection does not mention this limitation.

Claim 1 further recites in part:

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"melting and solidifying the initial metallic particle to produce a cast ingot"

Grant teaches that the initial metallic material is not melted, and accordingly teaches away from the claimed approach. Grant may not be used as a basis for a prima facie ground of rejection.

Claim 24 recites in part:

"furnishing a mixture of at least two nonmetallic precursor compounds together comprising the constituents of the metallic article"

Neither reference has such a teaching. Grant teaches that metallic powders (not nonmetallic precursor compounds) are mixed together for all but one constituent of the metallic article (Final Office Action, page 4, lines 17-19). At no point does Grant suggest that there is furnished "a mixture of at least two nonmetallic precursor compounds," those nonmetallic precursor compounds "together comprising the constituents of the metallic article..." In Grant, nearly all of the constituents of the metallic article are furnished as metals, not nonmetallic precursor compounds.

"Admitted prior art" teaches away from this limitation, by teaching that the constituents are furnished as metals: "These components and other articles are typically manufactured by furnishing the metallic constituents of the selected alloy..." (para. [0004]).

Claim 24 also recites in part:

"chemically reducing the mixture of nonmetallic precursor compounds to produce an initial metallic particle"

Neither reference teaches this limitation, because neither reference teaches a "mixture of nonmetallic precursor compounds."

Claim 24 further recites in part:

"melting and solidifying the initial metallic particle to produce a cast ingot"

Grant teaches that the initial metallic material is not melted; and accordingly teaches away from the claimed approach. Grant may not be used as a basis for a prima facie ground of rejection.

Claim 29 recites in part:

"furnishing a mixture of at least two nonmetallic precursor compounds together comprising the constituents of the metallic article"

Neither reference has such a teaching. Grant teaches that metallic powders (not nonmetallic precursor compounds) are mixed together for all but one constituent of the metallic article (Final Office Action, page 4, lines 17-19). At no point does Grant suggest that there is furnished "a mixture of at least two nonmetallic precursor compounds," those nonmetallic precursor compounds "together comprising the constituents of the metallic article..." In Grant, nearly all of the constituents of the metallic article are furnished as metals, not nonmetallic precursor compounds.

"Admitted prior art" teaches away from this limitation, by teaching that the constituents are furnished as metals: "These components and other articles are typically manufactured by furnishing the metallic constituents of the selected alloy..." (para. [0004]).

Claim 29 also recites in part:

"chemically reducing the mixture of nonmetallic precursor compounds to produce an initial metallic particle"

Neither reference teaches this limitation, because neither reference teaches a "mixture of nonmetallic precursor compounds."

Claim 29 further recites in part:

"melting and solidifying the initial metallic particle to produce a cast ingot"

Grant teaches that the initial metallic material is not melted, and accordingly teaches away from the claimed approach. Grant may not be used as a basis for a prima facie ground of rejection.

The dependent claims include additional limitations that additionally render them patentable, but these additional limitations need not be addressed at this time.

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Ground 4. Claims 1,3-6, 9, 11-15, 20, 21, 22, and 23 are rejected under 35 USC 103 over Kuehmann U.S. Patent 6,695,930 in view of Talmage U.S. Patent 3,495,958. Applicant traverses this ground of rejection.

Kuehmann teaches producing a steel by conventional melting and casting. Kuehmann teaches away from the present approach by using conventional metals as the starting materials, and therefore may not be used as the basis for the rejection.

Talmage teaches producing a steel using metallic powders as the starting materials. Some alloying elements may be supplied as reducible compounds. The powders are compacted. Talmage teaches that there is no melting of the compacted mass of powders.

First requirement--there must be an objective basis for combining the teachings of the references

The explanation of the rejection gives no objective basis for combining the teachings of the references. Moreover, it is difficult to see how the teachings could be reconciled and combined. Kuehmann teaches that the steel is prepared by melting the starting materials. Talmage teaches that the steel is prepared by not melting the starting materials. So, in the combination of teachings, there is no reason to know, absent reference to Applicant's own disclosure, whether the combination should be with respect to melting or not melting. If the rejection is maintained, Applicant asks that the Examiner explain the objective basis in the references for the asserted combination.

Second requirement--there must be an expectation of success

This requirement is not addressed in the explanation of the rejection.

Third requirement--the prior art must teach the claim limitations

Claim 1 recites in part:

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"furnishing a mixture of at least two nonmetallic precursor compounds together comprising the constituents of the metallic article..."

Neither reference has such a teaching. Kuehmann admittedly does not teach this limitation (Final Office Action, page 6, lines 5-7) because it uses all-metallic starting materials. Talmage teaches starting with metallic powders, not nonmetallic precursor compounds, for the major part of the constituents of the metallic article. (col. 3, lines 39-42; col. 5, lines 14-18; Example 1 at col. 8, lines 20-27). Talmage may use reducible metal oxide powders for minor portions of the constituents of the metallic article (col. 5, line 38-col. 6, line 4; Example 1 at col. 8, lines 20-27).

The quoted language of claim 1 means that the nonmetallic precursor compounds must furnish the constituents of the metallic article. Neither reference has such a teaching.

Claim 1 also recites in part:

"chemically reducing the mixture of nonmetallic precursor compounds to produce an initial metallic particle"

Neither reference teaches this limitation, because neither reference teaches a "mixture of nonmetallic precursor compounds" as previously quoted.

Claim 1 further recites in part:

"chemically reducing the mixture of nonmetallic precursor compounds to produce an initial metallic particle, without melting the initial metallic particle;

"melting and solidifying the initial metallic particle to produce a cast ingot of the metallic alloy, wherein the step of melting and solidifying produces an alloy that is a nickel-base superalloy, a cobalt-base superalloy, an iron-base superalloy, an iron-nickel-base superalloy, an iron-nickel-cobalt-base superalloy, or a martensitic steel;"

Neither reference teaches first chemically reducing without melting to get initial metallic particles, and then melting the initial metallic particles.

Claim 1 further recites in part:

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"melting and solidifying the initial metallic particle to produce a cast ingot"

Talmage teaches that the initial metallic material is not melted, and accordingly teaches away from the claimed approach. Talmage may not be used as a basis for a prima facie ground of rejection.

The dependent claims include additional limitations that additionally render them patentable, but these additional limitations need not be addressed at this time.

Ground 5. Claims 10, 16, 24, and 27 are rejected under 35 USC 103 over Kuehmann '930 in view of Talmage '958, and further in view of Peras '608. Applicant traverses this ground of rejection.

Claims 10 and 16 depend from claim 1 and incorporate its limitations. The combination of Kuehmann and Talmage does not teach the limitations of claim 1 for the reasons discussed earlier, which are incorporated here. Peras adds nothing helpful in regard to claim 1. Accordingly, dependent claims 10 and 16 are patentable over this ground of rejection.

Applicant incorporates the discussion of the First Requirement and the Second Requirement from the Ground 4 rejection. Peras adds yet another variation, and does not provide a basis for reconciling the contradictory teachings of Kuehmann and Talmage.

Applicant now addresses the Third Requirement for claim 24.

Claim 24 recites in part:

"furnishing a mixture of at least two nonmetallic precursor compounds together comprising the constituents of the metallic article"

None of the references has such a teaching. Kuehmann admittedly does not teach this limitation (Final Office Action, page 6, lines 5-7) because it uses all-metallic starting materials. Talmage teaches starting with metallic powders, not nonmetallic precursor

compounds, for the major part of the constituents of the metallic article. (col. 3, lines 39-42; col. 5, lines 14-18; Example 1 at col. 8, lines 20-27). Talmage may use reducible metal oxide powders for minor portions of the constituents of the metallic article (col. 5, line 38-col. 6, line 4; Example 1 at col. 8, lines 20-27). Peras has no pertinent teaching.

The quoted language of claim 1 means that the nonmetallic precursor compounds must furnish and constitute the constituents of the metallic article. None of the references have such a teaching.

Claim 24 also recites in part:

“chemically reducing the mixture of nonmetallic precursor compounds to produce an initial metallic particle”

The references do not teach this limitation, because they do not teach a “mixture of nonmetallic precursor compounds.”

Claim 24 further recites in part:

“melting and solidifying the initial metallic particle [which was produced without melting in the step of chemically reducing] to produce a cast ingot; and converting the cast ingot into a billet.” [explanatory material added]

None of the three references teaches melting and solidifying previously unmelted metallic particles to make cast ingot, and then converting the cast ingot into a billet. Kuehmann teaches that its metallic particles are produced by melting, and Talmage teaches against melting at any stage. This limitation means that a cast ingot must first be produced, and then the cast ingot is “converted” into a billet see para. [0043]. Peras teaches to the contrary, as its molten materials cast directly into billet form, according to Peras (col. 2, lines 18-35).

Ground 6. Claims 1,3-6,8, 10, 11, 13-15, 22, and 23 are rejected under 35 USC 103 over Kuehmann '930 in view of Bienvenu U.S. Patents 4,820,339. Applicant traverses this ground of rejection.

Kuehmann teaches producing a steel by conventional melting and casting. Kuehmann teaches away from the present approach by using conventional metals as the starting materials, and therefore may not be used as the basis for the rejection.

Bienvenu teaches a process which "makes it possible to obtain reduced metals in either the liquid or solid state..." (col. 1, lines 11-13). The "solid state" that Bienvenu teaches has the metals in the form of powders (col. 4, lines 28-32). The reduced metal may be an alloy produced from a mixture of several halides. (col. 3, lines 36-44) However, this single speculative paragraph in the summary is neither further discussed in the detailed description nor supported by any examples. Indeed, Applicant understands Bienvenu to teach that the direct production of alloys in powdered form is not feasible, but that conventional melting of pure metals is still required. (col. 3, lines 44-46)

First requirement--there must be an objective basis for combining the teachings of the references

The explanation of the rejection gives no objective basis for combining the teachings of the references. Moreover, it is difficult to see how the teachings could 'be reconciled and combined to teach anything other than an approach by which alloy particles are produced by melting. If the rejection is maintained, Applicant asks that the Examiner explain the objective basis in the references for the asserted combination, which would yield anything other than a conventional melting process.

MPEP 2143.01 provides that in constructing a §103 rejection, the proposed modification cannot render the prior art unsatisfactory for its intended purpose or change the principle of operation of a reference. MPEP 2142 and 2143.02 require that, in combining the teachings of two references, there must be a reasonable expectation of success in the combination. Both of these mandates would be violated in the proposed approach of combining the teachings of Kuehmann and Bienvenu, except if the point of the combination is to teach a process that requires melting of the initial metallic particles.

Second requirement--there must be an expectation of success

This requirement is not addressed in the explanation of the rejection.

Third requirement--the prior art
must teach the claim limitations

Claim 1 recites in part:

"chemically reducing the mixture of nonmetallic precursor compounds
to produce an initial metallic particle, without melting the initial metallic
particle;"

Neither reference teaches this limitation, because both references teach melting in
order to produce alloyed initial metallic particles.

Claim 1 further recites in part:

"melting and solidifying the initial metallic particle to produce a cast ingot of
the metallic alloy, wherein the step of melting and solidifying produces an alloy that
is a nickel-base superalloy, a cobalt-base superalloy, an iron-base superalloy, an
iron-nickel-base superalloy, an iron-nickel-cobalt-base superalloy, or a martensitic
steel;"

Neither reference teaches first chemically reducing without melting to get initial
metallic particles, and then melting the initial metallic particles. Both references require
melting to produce alloys. As discussed earlier, Kuehmann teaches a conventional melting
approach. Bienvenu teaches that melting is required to produce alloys, although pure
metals may be produced without melting.

The dependent claims include additional limitations that additionally render them
patentable, but these additional limitations need not be addressed at this time.

Ground 7. Claims 10, 16, 24, and 27 are rejected under 35 USC 103 over
Kuehmann '930 in view of Bienvenu '339 and further in view of Peras '608. Applicant
traverses this ground of rejection.

Claims 10 and 16 depend from claim 1 and incorporate its limitations. The combination of Kuehmann and Bienvenu does not teach the limitations of claim 1 for the reasons discussed earlier in relation to Ground 6, which are incorporated here. Peras adds nothing helpful in regard to claim 1. Accordingly, dependent claims 10 and 16 are patentable over this ground of rejection.

Applicant incorporates the discussion of the First Requirement and the Second Requirement from the discussions of the prior rejections. Peras adds yet another variation, and does not provide a basis for altering the teachings of Kuehmann and Bienvenu.

Applicant now addresses the Third Requirement for claim 24.

Claim 24 recites in part:

“furnishing a mixture of at least two nonmetallic precursor compounds together comprising the constituents of the metallic article”

The quoted language of claim 1 means that the nonmetallic precursor compounds must furnish and constitute the constituents of the metallic article. None of the references have such a teaching.

Claim 24 also recites in part:

“chemically reducing the mixture of nonmetallic precursor compounds to produce an initial metallic particle, without melting the initial metallic particle”

The references do not teach this limitation, because they do not teach a “mixture of nonmetallic precursor compounds” that is chemically reduced without melting.

Claim 24 further recites in part:

“melting and solidifying the initial metallic particle [which was produced without melting in the step of chemically reducing] to produce a cast ingot; and converting the cast ingot into a billet.” [explanatory material added]

None of the three references teaches melting and solidifying previously unmelted metallic particles to make cast ingot, and then converting the cast ingot into a billet. This limitation means that a cast ingot must first be produced, and then the cast ingot is "converted" into a billet, see para. [0043]. Peras teaches to the contrary, as its molten material is cast directly into billet form, according to Peras (col. 2, lines 18-35).

Ground 8. Claims 24-25 are rejected under 35 USC 103 over Nagata U.S. Pub. 2002/0005089 or Kundrat U.S. Pat. 5,567,224 and further in view of Peras U.S. Pat. 3,234,608. Applicant traverses this ground of rejection.

Claim 24 recites in part:

"melting and solidifying the initial metallic particle to produce a
cast ingot; and
converting the cast ingot into a billet."

None of the three references teaches melting and solidifying metallic particles to make cast ingot, and then converting the cast ingot into a billet. This limitation means that a cast ingot must first be produced, and then the cast ingot is "converted" into a billet, see para. [0043]. Peras teaches to the contrary, as its molten material is cast directly into billet form, according to Peras (col. 2, lines 18-35).

Applicant asks that the Examiner reconsider and withdraw the rejections.

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CONCLUSION

For at least the reasons set forth above, Applicant respectfully requests reconsideration of the Application and withdrawal of all outstanding rejections. Applicant respectfully submits that the claims are not rendered obvious in view of the cited art and thus, are in condition for allowance. Applicant requests allowance of all pending claims in a timely manner. If the Examiner believes that prosecution of this Application could be expedited by a telephone conference, the Examiner is encouraged to contact the Applicant's undersigned representative.

This Response has been filed within three (3) months of the mailing date of the Final Office Action and it is believed that no fees are due with the filing of this paper. In the event that Applicant is mistaken in these calculations, the Commissioner is hereby authorized to deduct any fees determined by the Patent Office to be due from the undersigned's Deposit Account No. 50-1059.

Dated: May 25, 2007

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